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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------|-------------|--------------------------------------|---------------------|------------------|
| 10/719,065 | 11/24/2003 | Johannes Catharinus Hubertus Mulkens | 081468-0306886 | 9148 |
| 909 | 7590 | 05/06/2005 | EXAMINER | |
| PILLSBURY WINTHROP SHAW PITTMAN, LLP | | | KIM, PETER B | |
| P.O. BOX 10500 | | | ART UNIT | |
| MCLEAN, VA 22102 | | | PAPER NUMBER | |
| | | | 2851 | |

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

ETC

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/719,065 | Applicant(s) HUBERTUS MULKENS ET AL. | |
| | Examiner Peter B. Kim | Art Unit 2851 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/866,875.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>112003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

Claims 1, 24, 25, 50, 51, 52, 54, and 55 are objected to because of the following informalities: “one volume” or “a volume” is not clear because how much gas is supplied or controlled is not specified. Appropriate correction is required.

The following art rejections of the objected claims are based on the examiner’s best understanding of the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 12, 13, 14, 24, 25, 26, 29, 30, 39, 50-52, and 54-62 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishi (2001/0015795).

Nishi discloses a lithographic projection apparatus and a device manufacturing method comprising a radiation system (IL), a support structure (RST) for supporting a patterning structure, a substrate table (WST), a projection system (PL) and a radiation absorber comprising a gas supply to supply an absorbent gas at a controlled concentration (para 0093), the absorbent gas absorbing radiation energy (para 0093). Nishi discloses the absorbent gas comprising helium and nitrogen (para 0093), mixed with purge gas (para 0096), and radiation comprising

Art Unit: 2851

wavelength less than 365 nm (para 0093). Nishi discloses radiation-energy detector to determine energy of radiation passing through a region of interactive gas (para 0101). Nishi discloses a concentration controlled volume of radiation absorbent gas to be traversed by the beam of radiation (para 0093). Nishi supplies and controls absorbent gas to effect a desired non-uniform attenuation (para 0093, 0096).

Claims 1, 12, 13, 14, 24, 25, 26, 29, 30, 39, 50-52, and 54-62 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishi (6,545,746).

Nishi discloses a lithographic projection apparatus and a device manufacturing method comprising a radiation system (328), a support structure (325) for supporting a patterning structure, a substrate table (302), a projection system (PL) and a radiation absorber comprising a gas supply to supply an absorbent gas at a controlled concentration (col. 45, lines 17-67), the absorbent gas absorbing radiation energy (col. 45, lines 17-67). Nishi discloses the absorbent gas comprising helium and nitrogen (col. 45, lines 17-42), mixed with purge gas (col. 45, lines 17-67), and radiation comprising wavelength less than 365 nm (col. 14, lines 6-20). Nishi discloses radiation-energy detector to determine energy of radiation passing through a region of interactive gas (col. 29, line 55 - col. 30, line 9). Nishi discloses a concentration controlled volume of radiation absorbent gas to be traversed by the beam of radiation (col. 45, lines 17-67). Nishi supplies and controls absorbent gas to effect a desired non-uniform attenuation (col. 45, lines 17-67).

Double Patenting

Claims 1-62 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6,538,716. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the claims of the patent and the instant application disclose a lithographic apparatus with radiation absorbent gas supplied to control attenuation and detecting the energy of radiation to control attenuation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter B. Kim
Primary Examiner
Art Unit 2851

April 25, 2005